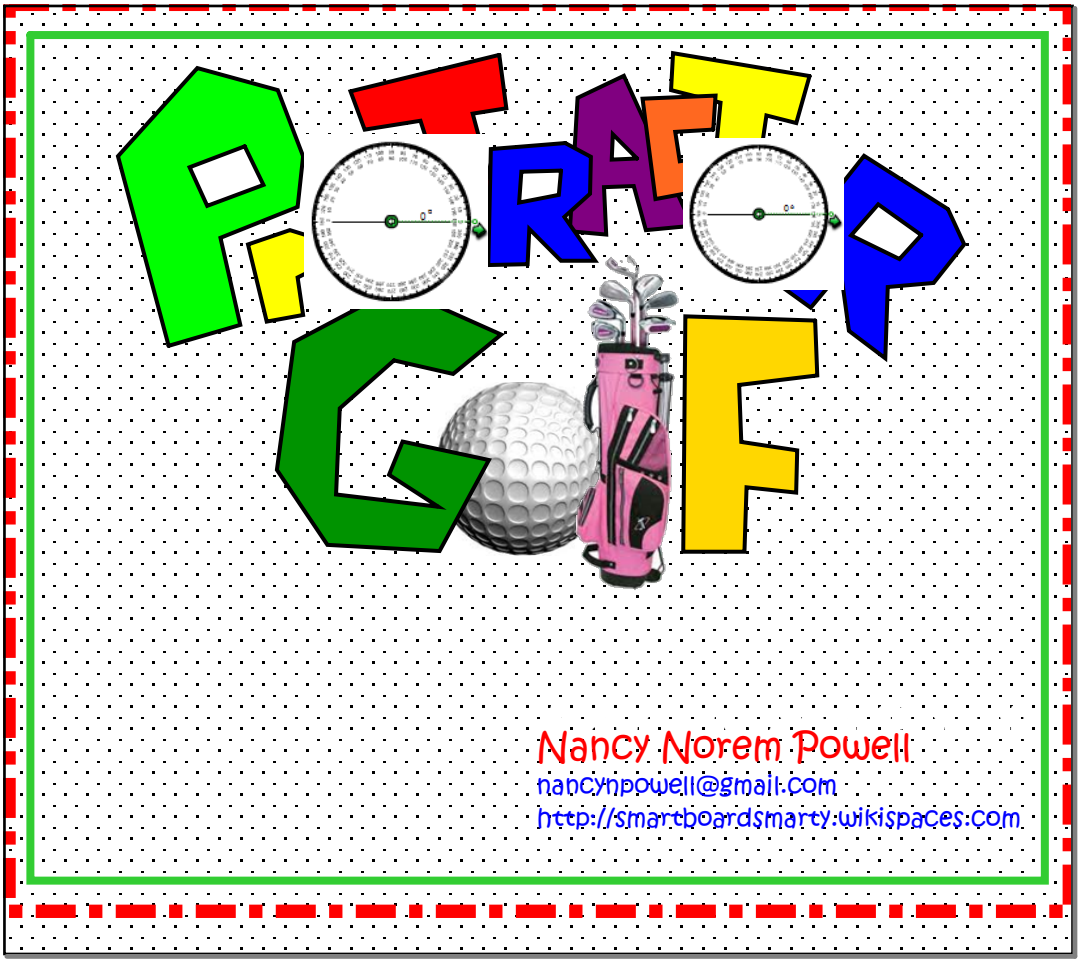
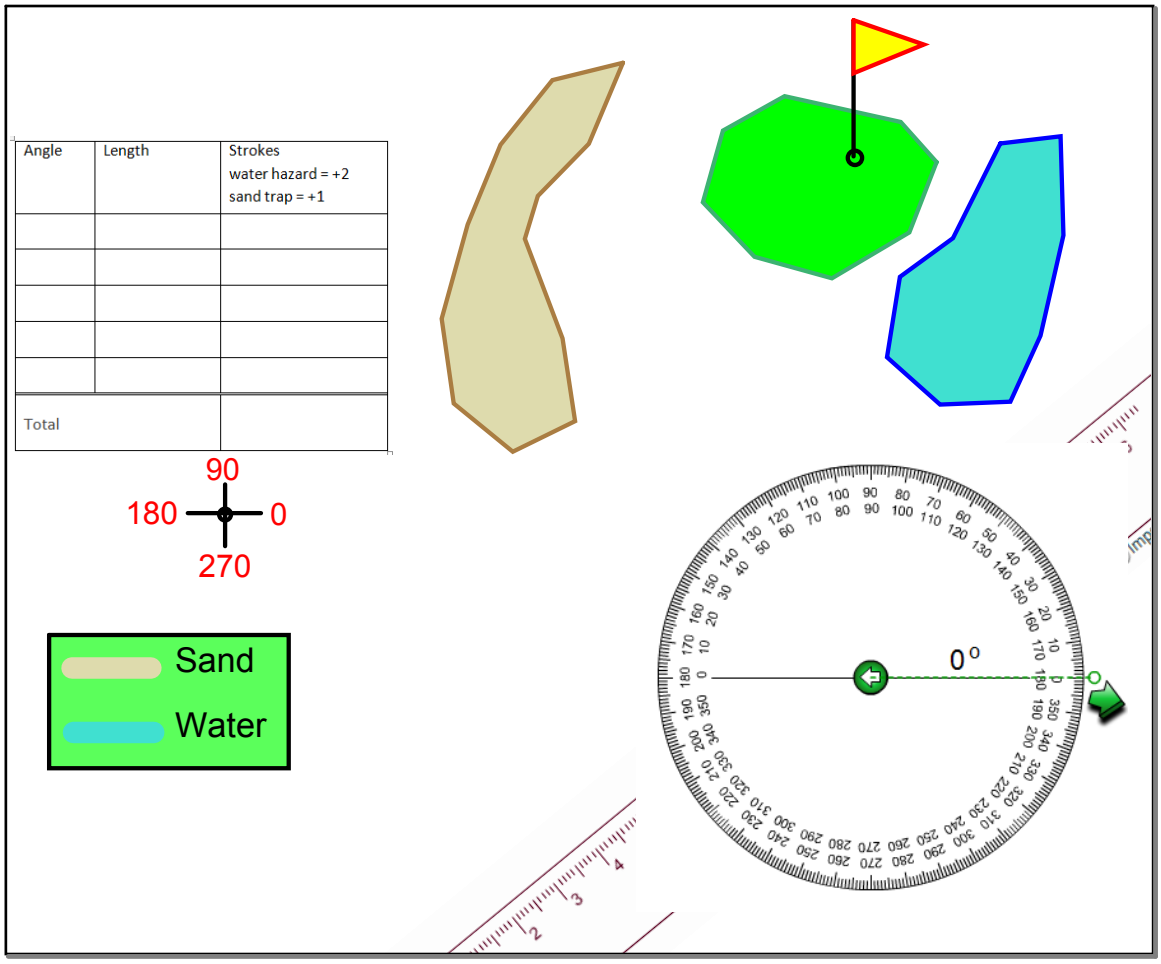
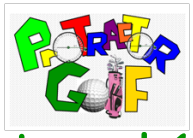

PROTRACTOR GOLF
Nancy Norem Powell
nancynpowell@gmail.com
http://smartboardsmarty.wikispaces.com


Angle
Length
Strokes
water hazard = +2
sand trap = +1
Total
90
180
0
270
Sand
Water
0°

Objective: Students learn to use a ruler and/or a protractor



Level 1

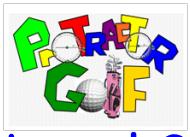
- Students work individually.
- Students measure the distance from the ball to the hole.
- Students measure the angle from the ball to the hole.
- Students record the number of the hole, the distance and the angle for each of the holes.

Objective: Students estimate distances and angle measures.

Level 2

- Students work in pairs.
- Student 1 estimates the distance and angle that will produce a hole-in-one.
- Student 2 writes down the estimate.
- Student 2 measures and draws the angle guessed on the hole
- Student 2 measures the distance and draws the segment guessed.
- If the ball goes in the hole, the hole is done. Students get a new hole and reverse roles.
- If not, Student 1 starts where the ball landed (end of the segment drawn) and guesses how to put the ball in the hole from there and the process repeats.

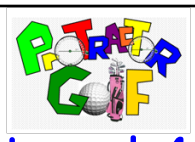
Objective: Students calculates distances with the Pythagorean Theorem and estimates angle measures.



Level 3

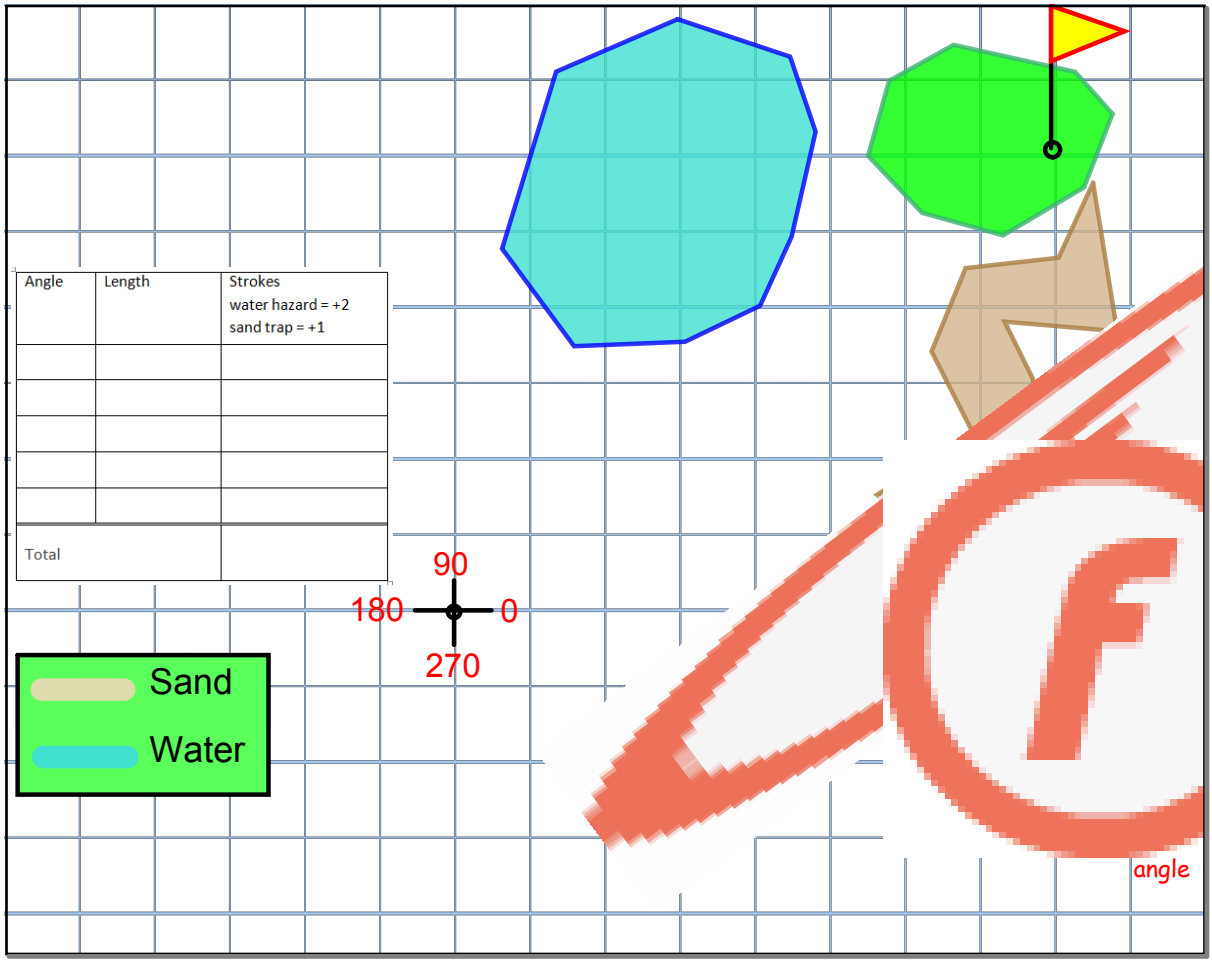
- Holes are drawn on graph paper or put on transparencies and put over graph paper.
- The rules of the game remain the same as Level 2. However, students can use the grid to help them estimate the distance to hit the ball using the Pythagorean Theorem.
- Calculators would be helpful here!

Objective: Students calculates distances with the Pythagorean Theorem and angle measures with trigonometry.

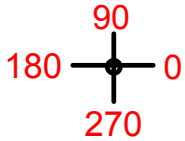


Level 4

- Holes are drawn on graph paper or put on transparencies and put over graph paper.
- The rules of the game remain the same as Level 2. However, students can use the grid to help them estimate the distance to hit the ball using the Pythagorean Theorem.
- Students use the grid and trig ratios to calculate the angle.
- Calculators would be helpful here!



Your Turn... design your own hole!

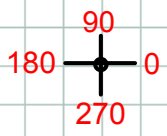


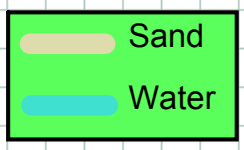
Sand

Water

Angle	Length	Strokes water hazard = +2 sand trap = +1
Total		

Your Turn... design your own hole!





Angle	Length	Strokes water hazard = +2 sand trap = +1
Total		

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Nancy Norem Powell - NCTM 2011 - Indianapolis, IN - Session #203

Protractor Golf

- Protractor Golf Instructions (MS Word)
- Protractor Golf Smart Board Demo (Smart Notebook file)

Mini Golf

- Mini Golf Instructions for a Hole-In-One and Mini Golf Project Description (MS Word)
- Mini Golf PowerPoint (MS PowerPoint)
- Mini Golf Smart Board Demo (Smart Notebook file)
- 3 Practice Holes (MS Word)

Math and the Smart Board

- Math on the Smart Board (Smart Notebook file)
- Math Manipulatives for the Smart Board (Smart Notebook file)

Questions and Comments? Email me at: nancynpowell@gmail.com

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